

### Remarks

The November 19, 2007 Official Action has been carefully reviewed. In view of the amendments submitted herewith and the following remarks, favorable reconsideration and allowance of this application are respectfully requested.

At the outset it is noted that a shortened statutory response period of three (3) months was set forth in the November 19, 2007 Official Action. Therefore, the initial due date for response was February 19, 2008. A petition for a two month extension of the response period is presented with this response, which is being filed within the two month extension period.

As another preliminary matter, Applicants note that the Examiner has acknowledged the election of the species SEQ ID NO: 47. It is the Examiner's position that searching the 47 sequences of claim 1 would be an undue search burden. The Examiner does state, however, that "up to 10 different SEQ ID NOs would be searched and examined." Accordingly, Applicants respectfully request that the Examiner search and examine SEQ ID NOs: 47-49, as recited in claim 5. Additionally, in accordance with the instant amendment, Applicants have added claim 8 which recites those peptides which are fragments of the elected species, SEQ ID NO: 47. Inasmuch as these peptides are fragments of a novel peptide, Applicants respectfully submit that there is no undue burden on the Examiner to search the fragments of the elected sequence.

The Examiner has rejected claims 1 and 4-6 under 35 U.S.C. §102(b) as allegedly being anticipated by WO 02/058450.

The Examiner has also rejected claims 1 and 4-6 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent 6,548,643.

The foregoing rejections constitute all of the grounds set forth in the November 19, 2007 Official Action for refusing the present application.

In accordance with the instant amendment, claim 1 has been amended and claims 7-12 have been added. The

amendment to claim 1 to include SEQ ID NO: 34 is supported throughout the specification including, for examples, Tables 3 and 4 and pages 17-18. Support for new claim 7 can be found, for example, at page 30, lines 1-24. Support for new claim 8 can be found in claim 1 and Tables 3-4. Support for new claims 9-12 can be found, for example, in original claim 2. New claims 9-12 are drawn to Group II of the restriction requirement set forth in the December 12, 2005 Official Action. However, in accordance with §821.04 of the MPEP, withdrawn process claims that depend from or otherwise include all of the limitations of an allowed product claim will be rejoined. No new matter has been introduced into this application by reason of any of the amendments presented herewith.

In view of the present amendment and the reasons set forth in this response, Applicants respectfully submit that the 35 U.S.C. §102(b) rejections of claims 1 and 4-6, as set forth in the November 19, 2007 Official Action, cannot be maintained. These grounds of rejection are, therefore, respectfully traversed.

**CLAIMS 1 AND 4-6 ARE NOT ANTICIPATED BY THE '450 APPLICATION**

The Examiner has rejected claims 1 and 4-6 under 35 U.S.C. §102(b) as allegedly being anticipated by the '450 application. Specifically, the Examiner contends that the peptide presented in Figure 7A of the '450 application encompasses SEQ ID NO: 47 of the instant invention. Applicants respectfully disagree with the Examiner's position.

It is a well-settled premise in patent law that in order to constitute evidence of lack of novelty under 35 U.S.C. §102, a prior art reference must identically disclose each and every element of the rejected claim. In re Bond, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

Claim 1, from which claims 4-6 depend, recites that the isolated MUC1 cytoplasmic tail peptide is selected from a group of specific SEQ ID NOs. The term "comprising" in the

claim refers to the composition rather than the isolated MUC1 cytoplasmic tail peptide. Accordingly, claim 1, as previously presented, clearly recited a composition which contained a MUC1 cytoplasmic tail peptide of a specific sequence, wherein the composition could comprise other components. However, in the sole interest of expediting prosecution of the instant application and eliminating any ambiguity perceived by the Examiner, Applicants have amended claim 1 to recite "wherein the sequence of the MUC1 cytoplasmic peptide is selected from the group consisting of" SEQ ID NOs: 3-49. Accordingly, there can be no confusion as to the amino acid sequence of the MUC1 cytoplasmic peptide.

The '450 application fails to disclose any of SEQ ID NOs: 3-47. The Examiner has provided a sequence alignment of the sequences provided in Figure 7A of the '450 application with SEQ ID NO: 47 of the instant application. However, the sequences provided by the '450 application are 42 and 72 amino acids long whereas SEQ ID NO: 47 is only 30 amino acids in length.

Inasmuch as the '450 application fails to teach and every element of the instantly claims invention, the rejection of claims 1 and 4-6 under 35 U.S.C. §102(b) is untenable. Withdrawal of the rejection is respectfully requested.

**CLAIMS 1 AND 4-6 ARE NOT ANTICIPATED BY THE '643 PATENT**

The Examiner has rejected claims 1 and 4-6 under 35 U.S.C. §102(b) as allegedly being anticipated by the '643 patent. It is the Examiner's position that the '643 patent discloses immunogenic peptides derived from the intracellular region of MUC1 and identifies preferred peptides which comprise amino acids 1-21 and 35-54 of the intracellular portion (SEQ ID NOs: 16 and 17 of the '643 patent).

Applicants respectfully disagree with the Examiner's position. As stated hereinabove, claim 1 and 4-6 recite MUC1 cytoplasmic tail peptides of a specific sequence, namely SEQ ID NOs: 3-49. The '643 patent fails to teach any of these

sequences, including SEQ ID NO: 47. Indeed, SEQ ID NO: 16 of the '643 patent comprises 3 amino acids not present in the MUC1 cytoplasmic tail (SEQ ID NO: 1 of the instant invention) and comprises only 21 amino acids of the cytoplasmic tail. Further, SEQ ID NO: 17 of the '643 patent is amino acids 35-54 of the tail. Inasmuch as SEQ ID NO: 47 is amino acids 1-30, it is evident that the '643 patent fails to teach each and every aspect of the instantly claimed invention.


Accordingly, the instant rejection of claims 1 and 4-6 under 35 U.S.C. §102(b) cannot be reasonably maintained. Withdrawal of the rejection is respectfully requested.

#### CONCLUSION

In view of the amendments presented herewith, and the foregoing remarks, it is respectfully urged that the rejections set forth in the November 19, 2007 Official Action be withdrawn and that this application be passed to issue.

In the event the Examiner is not persuaded as to the allowability of any claim, and it appears that any outstanding issues may be resolved through a telephone interview, the Examiner is requested to call the undersigned at the phone number given below.

Respectfully submitted,  
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